Coastline

Aqeel Aadam Sound

User manual (Revision 1.0.0)

Introduction

Thank you for using Coastline. Coastline is built around a simple idea – listening to your music, reacting to it, and providing you with something complementary to augment your sound further. Use it to add atmosphere and ambience to a piece for a depth of field that it currently lacks. Use it to provide a uniquely recognizable texture that listeners will never forget. Use it to bridge the gap between two or more sounds and create a confluence that glues everything together.

My hope is that Coastline becomes a new musical partner for you, helping to inspire fresh compositions as much as it enhances the ones you already have.

-Aqeel

Overview

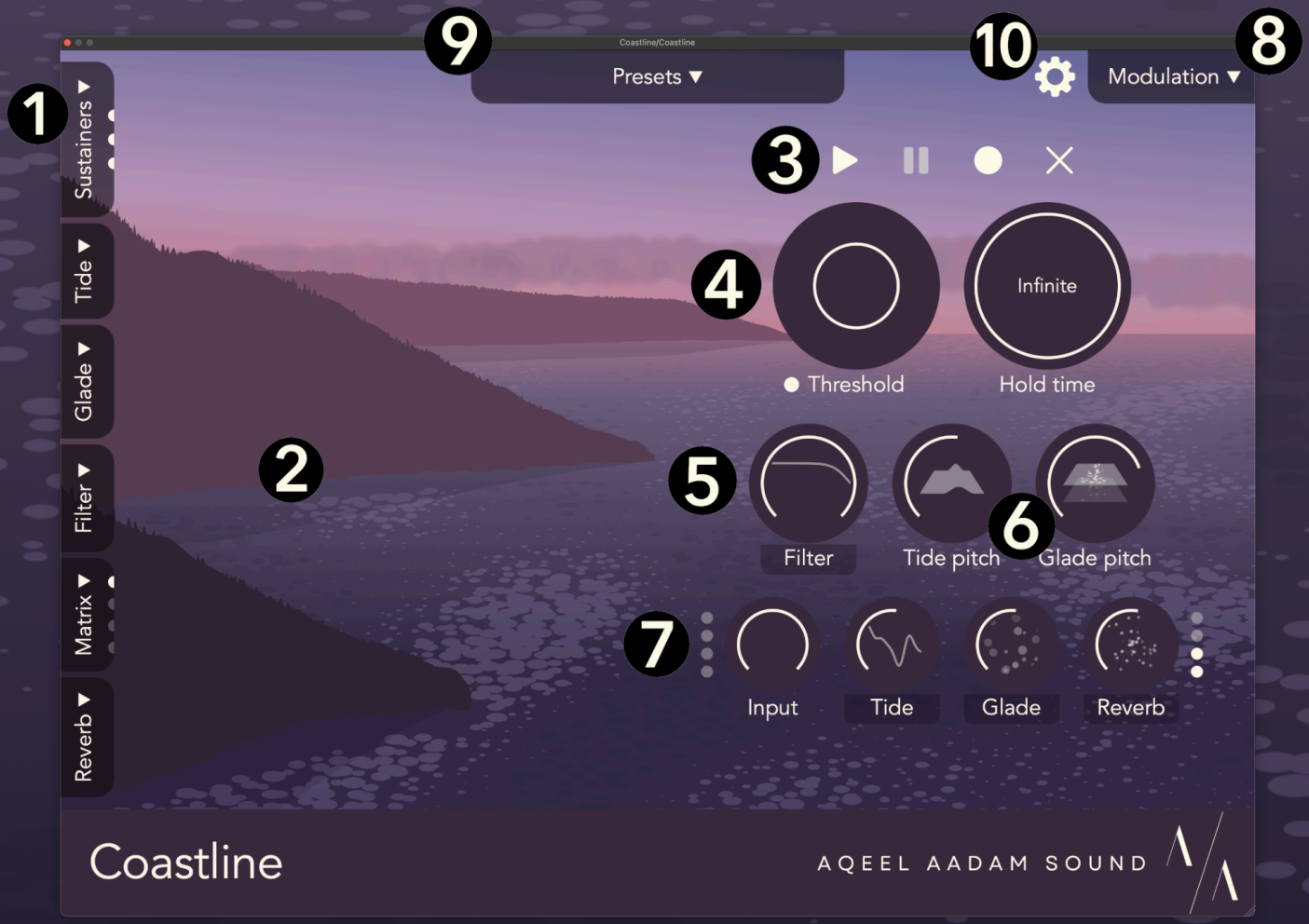
Coastline is a complementary texture generator. It produces sound that is derived from its input: the output may be tonal or noisy, but it always originates from the input source. Coastline can function in two ways: it can introduce sound around your input (similar to a reverb or delay) or reshape the input itself (like a filter or distortion). How you use it is completely up to you.

The heart of Coastline is the Sustainer. Sustainers capture your input and hold it indefinitely, and two independent synthesis engines bring them to life. From there, a multimode filter, an intermodulation matrix, a reverb, and a deep modulation system let you shape the result into anything from a gentle ambient wash to full-blown harmonic destruction.

Coastline does not generate sound on its own. As an audio effect, it needs an input signal to listen to and build upon.

Contents

User interface



This is the primary screen that you will see when using Coastline. Each section is described in depth in this manual.

Here's a brief overview:

1. Config menus: These are where the detailed settings for each engine and effect in Coastline can be found.
2. Visualizer: This visualizer displays the current output of Coastline. There is one mountain for each active Sustainer.
3. Playback controls: These are used to play, pause, record, or clear Sustainers.
4. Threshold and Hold time: These control the volume at which audio is recorded, and how long Sustainers run before dying out.

5. Filter cutoff: The cutoff frequency of the Filter, for convenience. Additional controls for the Filter can be found in its dedicated config menu (also accessed via the button below the knob).
6. Pitch controls: The pitch of Coastline resynthesis engines. Additional controls for Tide and Glade can be found in their dedicated config menus.
7. Mixer: This is where you can set the volume of each channel in Coastline. The four dots on the left show the input volume, which the four dots on the right show the output volume.
8. Modulation: This is where you can access Coastline's modulation matrix.
9. Presets: This is where factory and personal presets can be loaded or saved.
10. Settings: This is where all global configuration (including default settings) for Coastline can be found.

Sustainers

A Sustainer is a resynthesized version of a recording that can run indefinitely. It is a uniform version of your input that preserves the familiar character and qualities of the source while stretching it out forever. A Sustainer is loosely analogous to a loop in a looper – a short snapshot of incoming audio – but it goes a step further, resynthesizing that snapshot rather than simply replaying it.

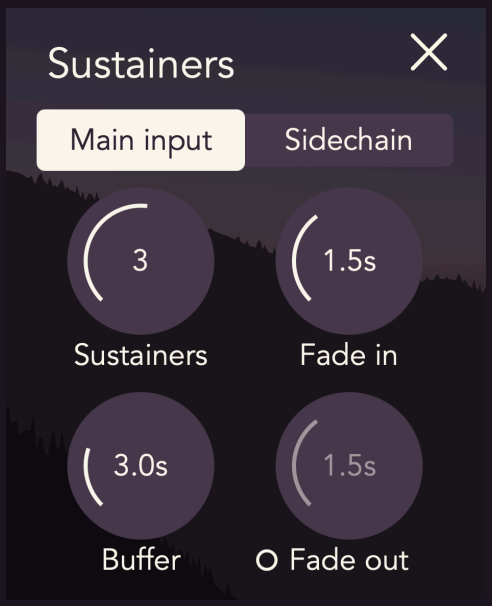
Recording

Recording audio will automatically create a Sustainer. The primary way to record is with the Threshold control: when the input volume crosses the threshold, a recording begins and a Sustainer is made automatically. Each new Sustainer appears as a mountain in the visual display.

The Threshold control can be turned off via the button underneath the knob. This can be useful to avoid losing or changing Sustainers once you already have a set that you like.

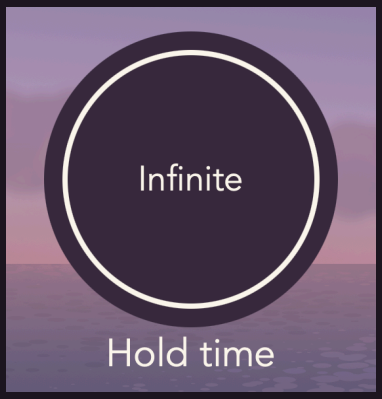
You can press the record button to capture a Sustainer manually at any time. Recording can also be triggered via a parameter exposed to your DAW, so you can automate it or map it to a controller.

Managing Sustainers



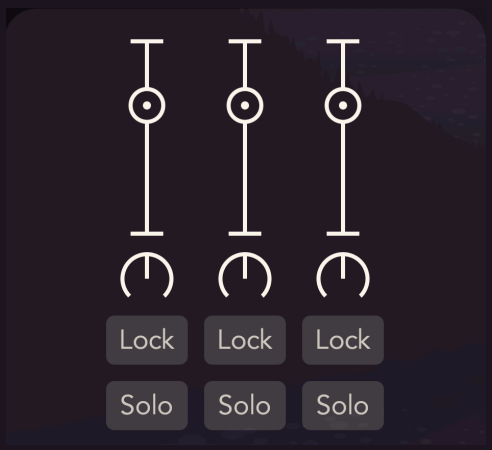
Each recording creates and starts playback for a new Sustainer. If every Sustainer is in use and a new one is recorded, the oldest fades out and is replaced.

The Sustainers menu provides several options for managing Sustainers. You can set the total number of Sustainers that can run at once, the length of recording each one is based on, and the fade in and fade out times that govern how gradually they enter and exit (by default a single time controls both fades; enable the second knob to set them independently).



The Hold time controls how long a Sustainer runs before automatically fading out. By default this is infinite, so a Sustainer will run forever. Lower it to create more momentary sounds that fade away on their own after a set time, more similar to a reverb or delay.

Sustainers can also be played and paused. Pressing pause stops playback and pressing play resumes it, with the speed of that transition set by the fade in and fade out times. To clear all Sustainers immediately, press the X.



Finally, a mixer lets you balance the volume and pan of each Sustainer and lock or solo them individually. Locking prevents a Sustainer from being replaced by a new recording and stops it from fading out due to the Hold time. Soloing helps you identify which Sustainer is which.

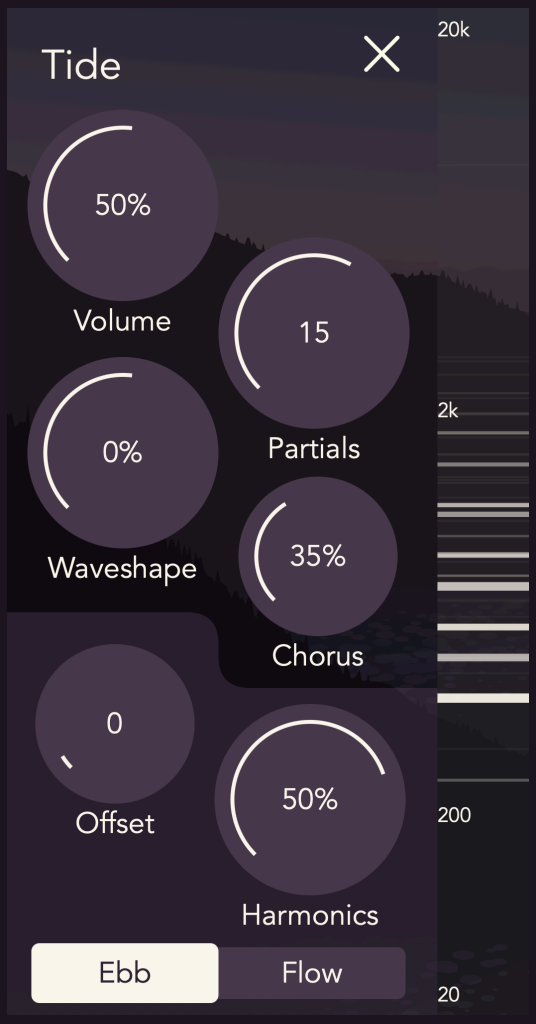
Lock is ideal for a single drone that should run underneath everything else, while you freely record and replace the other Sustainers.

Recordings can be made from the main input to Coastline, or via the sidechain. This can be useful to complement a sound with recordings from a totally different channel. Please note that the "input" channel throughout Coastline (e.g., in the mixer) will still use the main input; the sidechain input will only be used for recording and is not monitored directly.

Resynthesis Engines

Coastline resynthesizes the audio inside a Sustainer using two engines: Tide and Glade. They have different roles and produce different results, but they work well together – Tide distills a signal down to its purest tonal form, while Glade preserves its timbre and texture. Together with the dry input and reverb, Tide and Glade form the four channels that appear throughout Coastline's mixer and Audio Matrix.

Both engines always run, even when muted, so they remain available to the audio effects. If you are not using a channel at all and want to save CPU, you can disable it entirely in its respective menu.



Tide

Tide analyzes the strongest frequencies in the signal and builds an additive synthesizer from them.

It assigns a set of oscillators to match the primary frequencies it detects in the input, and by default it resynthesizes using sine waves for a very pure reconstruction of the sound. Tide's pitch control is located on the main panel – this changes Tide's pitch relative to the original input, in semitones.

Tide has three main controls: partials, waveshaping, and chorus.

Partials sets how many oscillators are used to reconstruct the signal. The oscillators are ordered by volume, so the first is the loudest detected frequency. As you add more, Tide brings in

progressively fainter frequencies from the original recording.

Waveshaping changes the shape of the oscillators. At 0% they are sine waves. Turning the control toward -100% morphs them into a saw wave, which adds new harmonics to the signal, while turning toward 100% wavefolds the sine waves. A small oscilloscope on the volume knob shows the current shape and harmonics present in the signal.

Chorus is a stereo chorus that adds lushness to the sound. A small amount is applied by default.

Tide has two modes – Ebb and Flow – which differ in how they reconstruct the input.

Ebb

Ebb resynthesizes the input by ordering partials by significance and replaying them. It is the more basic of the two modes, and creates a transparent output that is most representative of the original signal.

Ebb has two main controls: offset and harmonics.

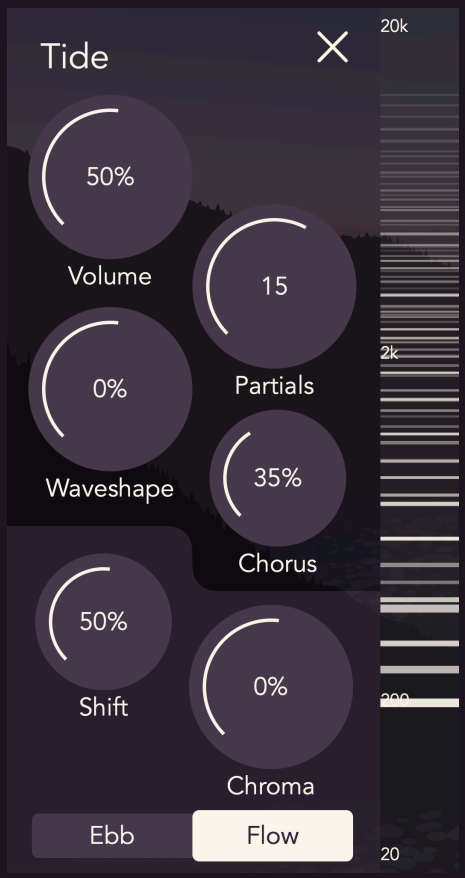
Offset shifts which partial is treated as the loudest, effectively removing the most significant partials from the set you hear. For example, if you are hearing 5 partials – think of them as partials 1 through 5 – increasing the offset shifts you to 2 through 6, then 3 through 7, and so on. Removing the most prominent frequencies changes the context of what you hear and brings the buried parts of the signal to the front.

Harmonics changes the proportion of identified frequencies that are treated as harmonic versus

inharmonic. At 0% the original balance in the signal is heard. Toward 100%, you hear more of the harmonic frequencies, which tend to be pleasant and consonant with one another. Toward -100%, the inharmonic frequencies come forward – the ones that stand out as unique and that you may never have noticed in the original.

Offset and Harmonics are where Coastline can get strange. Together they are the main controls for how harmonious or how distinctive Tide's output sounds, so dial them in to taste.

Flow



Flow is more characterful and introduces tones and harmonics that may not have been present in the original signal. In this mode, Tide identifies the individual notes played in a recording and builds a harmonic series of partials for each one. Flow has two main controls: chroma and shift.

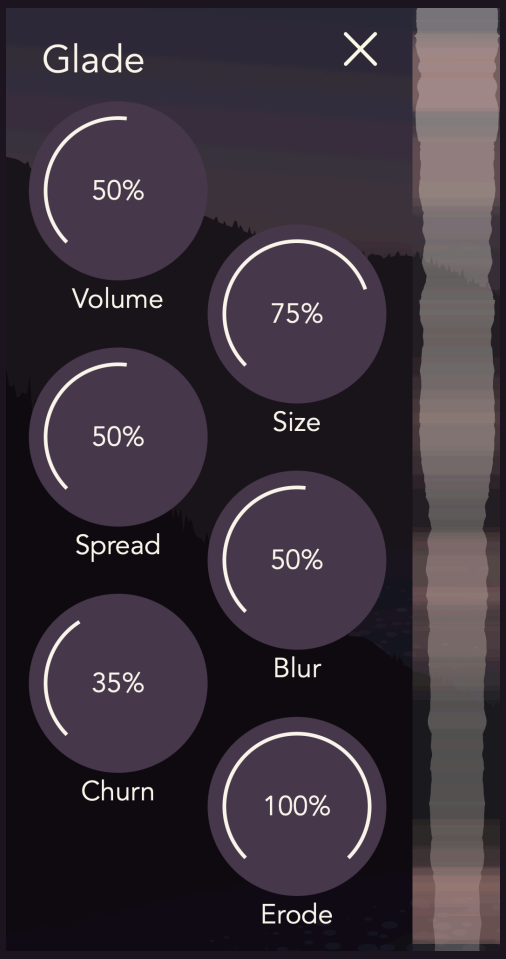
Chroma changes the balance of those partials, much like a formant filter. Toward the left the output tends to be darker, and toward the right it tends to be brighter.

Shift changes how Chroma behaves. At 100%, Chroma operates relative to the pitch of the fundamental, so a given setting might always boost the third harmonic and cut the fifth. At 0%, Chroma operates on absolute frequencies instead, so the same setting might always boost 500 Hz and cut 800 Hz regardless of the note being played.

In this mode, the partials control functions slightly differently. It changes how many harmonics are played for each note identified in a recording.

Changing Partials in Flow mode can have an effect almost like opening or closing a filter.

Glade



Glade is a granular synthesis algorithm that sustains the input with a semi-random cloud of grains. The signal is analyzed to reduce harsh transients and clicks, and the grains wander around the sample to explore its different parts.

Because Glade preserves the timbre of the signal, it makes a useful counterpart to Tide, which distills the signal into its purest form. Between the two engines, you can decide how closely to mirror the original signal, or how far to push toward something more abstract.

Glade's pitch control is located on the main panel, and can be set independently of Tide's pitch. This changes Glade's pitch relative to the original input, in semitones.

Glade has five main controls: size, spread, blur, churn, and erode.

Size sets the length of the grains. Short grains are choppier, while longer grains tend to have a smoother result.

Spread sets the random stereo spread of the grains.

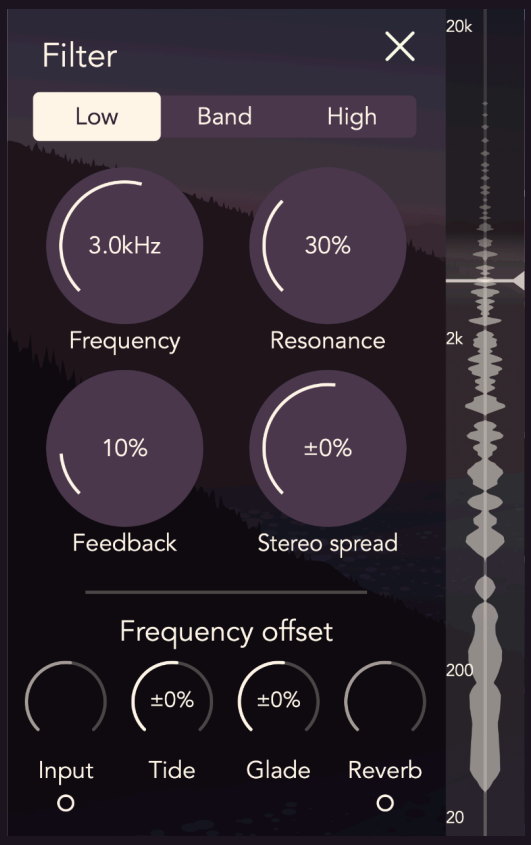
Blur softens the volume contour of each grain for a more consistent level without dips or spikes. At 0%, no volume compensation is applied.

Churn controls how quickly the grains wander around the recording. At low values they move slowly, emphasizing different parts of the sample for long stretches; at high values they move quickly, so you begin to hear the whole recording at once.

Erode reduces the sample rate of playback.

Changes to Erode are smoothed, similar to a tape or bucket brigade delay. As a result, changing or modulating it produces pleasant, tape-like warbles.

Filter



Coastline includes a multimode filter that all of its audio can pass through. It offers three modes – low-pass, band-pass, and high-pass – alongside familiar base controls: a cutoff frequency and a resonance control for emphasizing the signal at the cutoff.

Beyond these, the filter offers a feedback control, which adds audio-rate modulation at the cutoff frequency by feeding the input signal back into the cutoff. This adds drive to the sound, and it is the first of several ways to add distortion in Coastline. A stereo spread control offsets the cutoff between the left and right channels, which can add movement to the signal.

In addition, the filter has independent settings for each channel. By default it runs only on Tide and

Glade, but you can also enable it on the input and on the reverb. You can also set a per-channel frequency offset to fully dial in the filter for each individual channel.

Because the Filter can run on the input, you can use Coastline as a simple or reactive standalone filter for audio as well.

Audio Matrix

The Audio Matrix is where Coastline becomes a completely modular, configurable effect. This is where channels can amplitude-modulate another channel or itself. The effect can be a subtle grit, or a more extreme, full-on distortion.

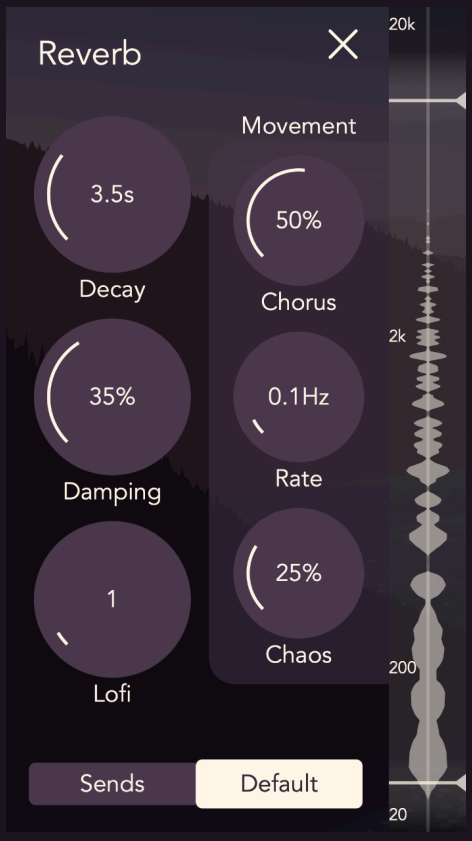
The matrix offers an amount control for how much modulation is applied, along with two controls that shape the timbre of the modulation through a wide band-pass filter: a center for its center frequency and a width for how broad it is.

Critically, everything in the Audio Matrix happens pre-fader, before any volume adjustments. As a result, you can mute a channel's output from the main mix and still use it as a source or destination within the matrix. This allows a muted channel to be used as a utility for sound design.

A favorite approach is to mute Tide entirely and use it purely as a modulation source – for instance, using a muted Tide to modulate Glade, or to modulate the input itself for unique distortion. Tide's settings still shape the result even though it is never heard directly.

The Audio Matrix also supports sample loading, and Coastline includes a number of built-in field samples by Nathan Moody. Any sample loaded into Coastline becomes an infinite, random loop that can be used to mix a unique texture into your sound.

The sound sources available in the Audio Matrix are: main input, sidechain input, Tide, Glade, reverb, white noise, pink noise, as well as built-in and custom samples. The destinations available are: main input, Tide, Glade, and the reverb.



Reverb

Coastline's Reverb is applied to all channels equally by default, including the input. Its core controls are decay, which sets the length of the tail, and damping, which suppresses higher frequencies within it. A lofi control downsamples the tail of the reverb to make it grittier.

Three further controls govern how much modulation is applied to the reverb tail. Chorus sets the overall amount of modulation, rate sets the speed of a slow LFO that modulates the reverb, and chaos introduces random fluctuations in the tail. For a traditional, synchronized LFO chorus, turn

chaos all the way down; for a chorus that is not completely synchronized, turn it up.

Two options at the bottom of the section determine what runs through the reverb. By default, the three channels – input, Tide, and Glade – feed the reverb at the same volumes set in the output mixer. You can override this to treat the reverb as a send effect instead, configuring exactly how much of each channel is sent.

The send routing is pre-fader, so you can mute a channel's output and still send it to the reverb. You can also do the opposite, and use it to omit a channel from the reverb, while still hearing the raw channel in the output.

Modulation

The Modulation menu is where Coastline can be configured into a completely custom effect or synthesizer. Coastline features 8 automated and performance-based modulation sources that can be routed to any control within the device.

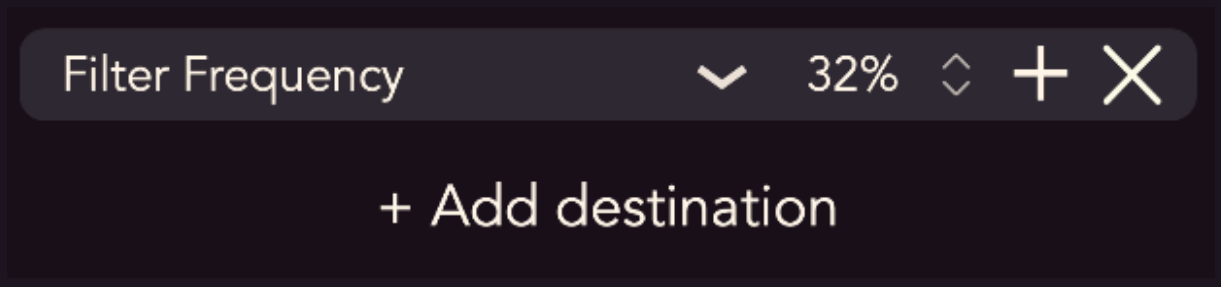
Assignments

Up to 16 modulation assignments can be made. Each modulation assignment contains three primary aspects:

- The modulation source. This can be thought of as a value that outputs somewhere between 0% to 100%.
- The destination. This is the control being affected by the modulation source.
- The intensity. This controls the depth of the effect that the modulation source will have on the destination. At 0%, there will be no effect, and at 100%, the full range of the control can be spanned. Intensities can also be negative; at -100%, the full range is spanned, but the control is inverted.

In addition, you can toggle between unipolar or bipolar behavior for an assignment. In unipolar mode, the modulation will only add to the current setting for the control (or subtract, if negative). In bipolar mode, the modulation will be centered on the current setting and can add or subtract.

Assignments can be made in two ways: You can click + Add destination below each modulation source, or you can simply drag + Drag to assign to a control that you would like to affect.



Modulation sources

Coastline offers 8 modulation sources for affecting sounds in a generative or performative way.

LFO

There are four LFOs available. An LFO is a traditional low frequency oscillator with a variety of shapes, designed for repetitive modulation at frequency below audible ranges. The LFO has two primary controls:

- Speed, which can be defined in seconds or synced to the BPM of your DAW.
- Morph, which will skew the output of the LFO in a different way for each shape.

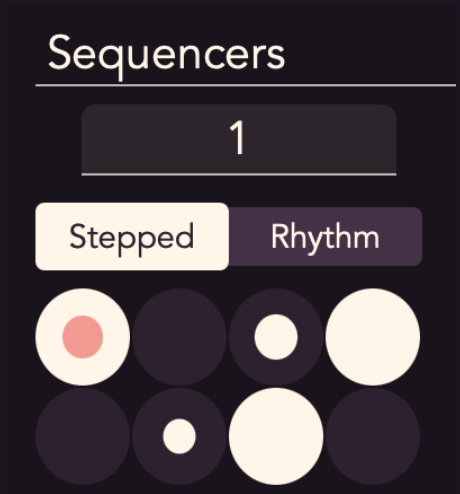
Jitter

There are two Jitters available. Jitter is a smooth random source, intended to add constant variations to a sound. Jitter's speed can be changed, and can range from glacially slow motion to a constant frenzy of activity.

Jitter is especially well-suited for introducing unpredictability, especially throughout the lifetime of a held sound.

Sequencer

Coastline offers two sequencers, which can be used in two modes.



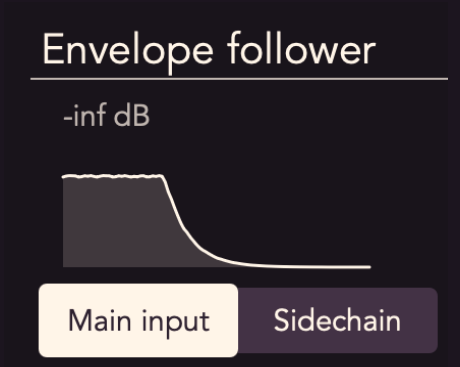
A stepped sequencer simply moves from one value to the next, with optional slew to make the transitions gradual.

A rhythmic sequencer instead pulses: it rises to the value of each stage and then falls back to zero, with a configurable attack and decay that set how plucky or how gradual each pulse is.

Each sequencer has its own speed and independent length.

Performance slider

When assigned, the performance slider adds a large slider to the UI, designed with live performance in mind. The slider can be used as a macro control to change many things at once, or used simply as an auxiliary slider for convenience.



Envelope follower

The envelope follower creates a modulation source from the input signal. A trim control sets which volume is treated as the maximum, while attack and release controls smooth the value so that it is not overly jagged. The envelope follower can react to the primary input or sidechain input.

Random per Sustainer

Random per Sustainer generates a static random value each time a Sustainer is created, which is a nice way to introduce slight variations between recordings.

Sustainer age

This modulator starts at zero and grows until it reaches its maximum at a time you set. Use it to

make a sound grow or decay over its lifetime, such as opening or closing the filter.

Sustainer pitch

This modulator provides a value based on the central pitch identified in Tide, which is useful for key-tracking effects, such as a filter that opens with pitch or a touch less reverb on lower notes.

Waymaker

Coastline can pair with Waymaker for additional pitch sequencing and control. Any version of Waymaker from 1.1.1 onward can connect to Coastline.

Channel sequencing

In Waymaker, you set which channels are sequenced for each Sustainer. Each Sustainer is independent, so for any one of them you can sequence Tide, Glade, both, or neither. When a channel is sequenced for a Sustainer, that channel's pitch control in Coastline is overridden and instead follows the pitch set by Waymaker.

Waymaker also lets you set a glide time, which adds a pleasant portamento effect to pitch changes.

Some of Waymaker's sequences let different Sustainers settle on different pitches. In Waymaker's Weight sequence, for example, each Sustainer independently advances to a random stage.

Sequence timing

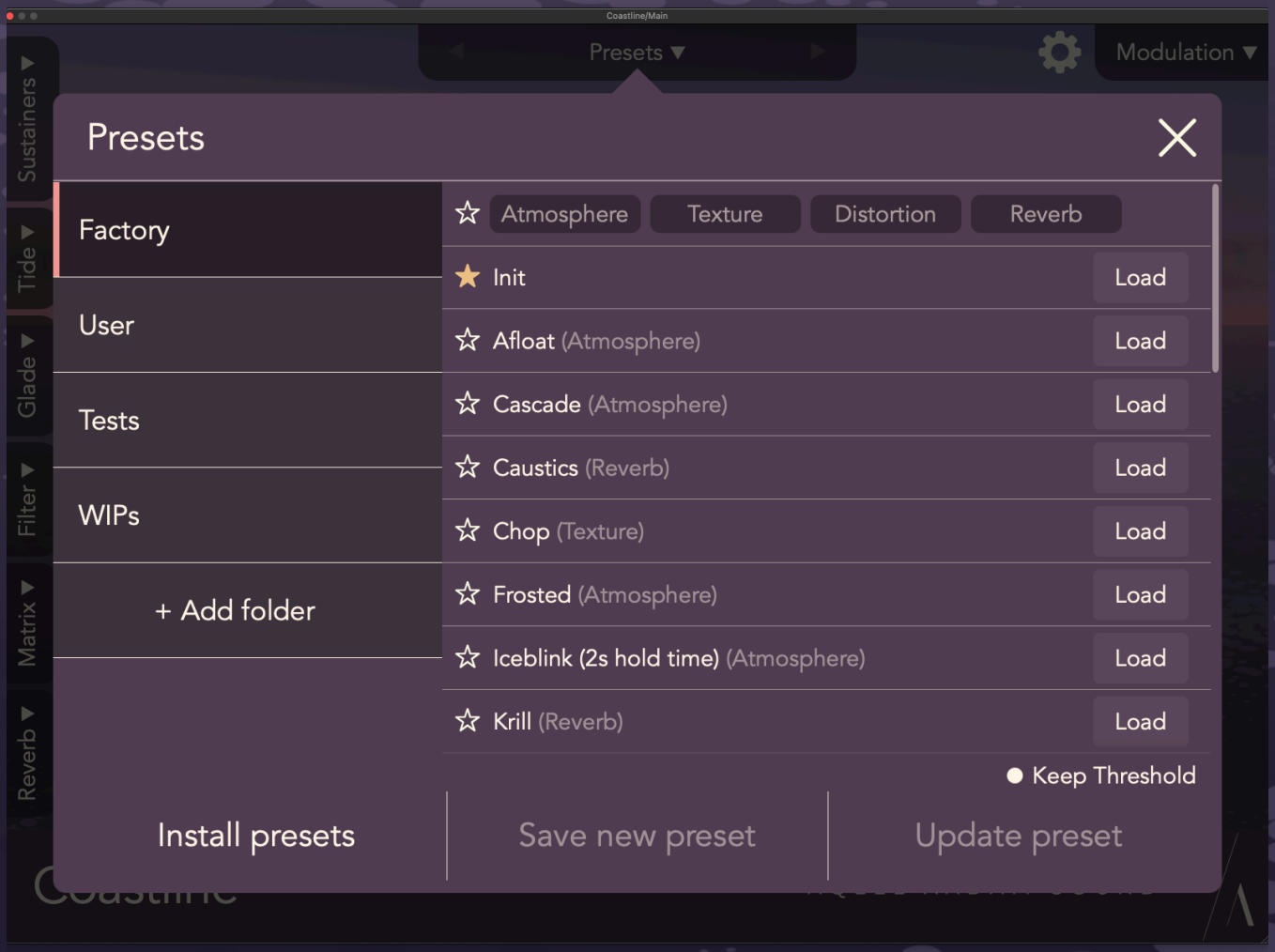
Waymaker's sequences can advance in three ways to change the pitch of Coastline's channels. A sequence can advance based on time, stepping forward at a set musical duration (e.g., one quarter note) or timeframe (e.g., two seconds). It can also advance each time Waymaker receives a MIDI note, for custom timing. Finally, it can advance each time Coastline begins a new Sustainer.

Integrated presets

Waymaker's preset system can also save and load Coastline data as well, for a seamless preset file that contains data for both products when connected.

Get Waymaker.

Presets



Coastline comes with a collection of handcrafted factory presets and samples as well as the ability to save and create your own presets. Presets can be accessed from the Presets button at the top of the main screen.

The Keep Threshold option will prevent loaded presets from affecting the Threshold control, which is handy if this is already set based on your input signal.

Saving presets

All Coastline presets must exist within a folder. By default, you will have a User folder available, though new folders can be created easily via + Add folder. A new preset can be saved by clicking Save new preset, which will give you the ability to name and save a preset within the current folder. Please note that presets cannot be saved to the Factory folder.

When saving a preset, you will have the option to optionally add a category as well: atmosphere, texture, reverb, or distortion.

If a preset is currently loaded, it can be updated via the Update preset button. This will overwrite the current preset, which cannot be undone (when in doubt, it may be safer to save a new preset instead).

Importing and Exporting

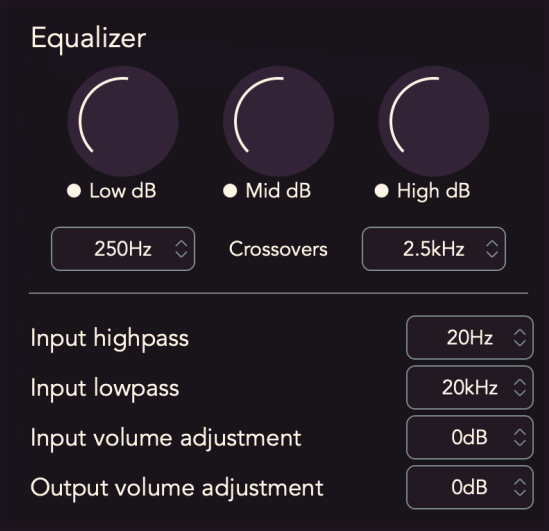
Presets can be imported into Coastline's preset system in two ways: using the Install Presets button in the bottom left of the Presets menu or simply dragging and dropping them into Coastline. Presets can be imported as .coastline files, a folder with .coastline files (and samples), or a .zip containing .coastline files (and samples).

A preset folder can be exported directly as a .zip file from the bottom of the folder's list of presets. In this case, Coastline will automatically create a ZIP archive of all presets for easy sharing or distribution.

Settings

The Settings menu is accessed via the gear icon in the top right of the main screen. This menu is where all of Coastline's global settings are configured. Where noted, some of these settings will become the default when changed.

Equalizer



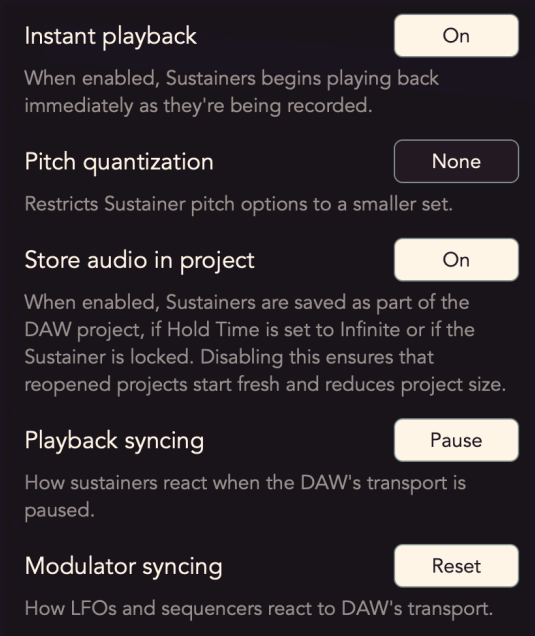
A simple three-band equalizer sits at the top, letting you adjust the proportion of lows, mids, and highs along with the amount of boost/cut and the crossover points between bands. Bands can be turned on or off to create a broad low-pass, a broad band-pass, or a scoop – a fun creative effect in its own right.

Input filtering

An input high-pass and low-pass filter lets you cut frequencies from the input signal. Because Coastline is very sensitive to its input, this is a useful way to knock out problem frequencies – such as a hum or whine from a particular instrument – before they ever reach Tide.

Input and output volume

You can boost/cut the signal before it reaches Coastline, and boost/cut all of Coastline's output afterward.



Instant playback

This controls whether Coastline begins sustaining a sound as soon as possible or waits for a recording to complete first. With instant playback on (the default), playback starts immediately, and the Tide and Glade analysis improves over time as the recording is made. With instant playback off, Coastline completes a full recording and then sustains it from a single, one-time analysis.

With instant playback on, Coastline can behave more like a reverb, with sound reacting immediately in response to input. With instant playback off, Coastline might sound more like a delay, with distinct echoes playing out after a period of time.

Pitch quantization

This restricts the pitch of Tide and Glade to certain musical intervals – octaves, or octaves and fifths. It is especially useful for performance, when you want to move pitch around with confidence that it will land somewhere musical.

Store audio in project

By default, saving a project saves and reopens the Sustainers along with it. Turn this off to start each session fresh, more like a delay or reverb, in which case no audio is stored in Coastline. Turning this off will also lighten storage space required for DAW project files.

Playback syncing

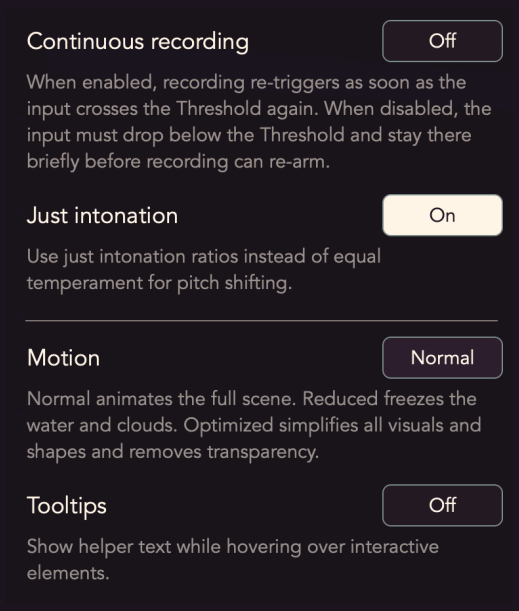
This sets how the Sustainers respond to your DAW's transport. By default they pause when your DAW pauses, which keeps things quiet while the transport is stopped. You can instead set them to stop, which clears and deletes the Sustainers when the DAW pauses, or to ignore the transport entirely and keep running.

Setting Sustainers to stop can be useful when bouncing a project repeatedly, in order to ensure that each bounce starts fresh.

Modulator syncing

Similar to Playback syncing, this controls how the LFOs and sequencers respond to the transport. By default they reset when playback starts, keeping everything synchronized; they can also be set to stop when playback stops, or to just ignore the transport.

Continuous recording



This changes how the Threshold behaves. By default, the signal must rise above the Threshold and then fall back below it before another recording can begin, so that a single held note or chord will not keep creating new recordings. With Continuous recording on, Coastline records whenever the input is above the threshold, agnostic of the input signal.

In general, set the Threshold around the peak volume of your sound, so that each note crosses it and then falls back below to re-arm recording.

Just intonation

This sets which ratios Coastline uses when repitching Tide and Glade. Just intonation is the default; turn it off for equal temperament.

Motion settings

This lets you disable the background animation, or switch to a fully optimized graphical mode that removes animations and makes menus opaque to

ease the load on your GPU. This setting is shared across all instances of Coastline.

Tooltips

Coastline will provide helper text when hovering over or touching a control for a quick reminder of its function. By default, this is enabled. Changing this will become the default behavior for future instances of Coastline.

Purchase entitlements

Purchase of the desktop version of Coastline entitles you to one license key of indefinite usage, limited to two computers at a time. If you migrate new computers, lose access to one, etc., you will have the option to deregister previous computers when licensing a new computer.

Purchase of the iOS version of Coastline entitles you to indefinite usage across all iOS devices on your account.

Coastline comes bundled with factory presets and samples created by BlankFor.ms. These presets and samples can be used freely without attribution.

Free trial

For desktop versions, Coastline can be used for a one-week free trial. All features will be available during this trial except for saving presets.

Installation

macOS: Open the .pkg installer and follow the provided instructions.

Windows: Open the .exe installer and follow the provided instructions.

After the above instructions, you will need to restart your DAW and/or re-scan for new plug-ins.

Compatibility

macOS 10.13 or later, Intel and Apple M1/M2 chips supported. VST3/AU/AAX format.

Windows 10 or later, 64-bit. VST3/AAX format.

Coastline requires an internet connection for initial authorization. Internet connection will not be necessary afterward.

Uninstall locations

macOS:

- AU: Macintosh HD/Library/Audio/Plug-Ins/Components/
- VST3: Macintosh HD/Library/Audio/Plug-Ins/VST3/
- AAX: Macintosh HD/Library/Application Support/Avid/Audio/Plug-Ins/
- Presets and data: Macintosh HD/Users/<username>/Application Support/AqeelAadamSound/Coastline/

Windows:

- VST3: C:\Program Files\Common Files\VST3\
- AAX: C:\Program Files\Common Files\Avid\Audio\Plug-Ins\
- Presets and data: C:\Users\<username>\AppData\Roaming\Aqeel AadamSound\Coastline\

Support

For any support inquiries, please feel free to reach out!

Attributions

Coastline was imagined, designed, and built by Aqeel Aadam.

Coastline features built-in field samples courtesy of Nathan Moody.

Special thanks to family, friends, and early beta testers:

- Ian Chandler (Tired Moons, Watercolors)
- Tyler Gilmore (BlankFor.ms)
- Saumon Oboudiyat (Sohme)
- Stefan Nazarevich (SAN)
- William Deeb (Peninsula Repairs)
- Michael Gelberg (Stafford)